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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HAOCHUAN JIANG

Appeal 2009-009372
Application 10/605,575
Technology Center 1700

Decided: January 19, 2010

Before JEFFREY T. SMITH, KAREN M. HASTINGS, and JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 9 and 12-16.[1] We have jurisdiction under 35 U.S.C. § 6.

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[1] The Examiner withdrew the rejections under 35 U.S.C. § 112 of claims 1, 2, 6-8, 10, and 11 (*see* Ans. 3). No rejections over prior art were made in the final rejection.

We REVERSE.

Statement of the Case

Appellant claims a method of manufacturing a collimator assembly useful in computed tomography imaging (Spec. [0001]-[0003]).[2]

The only rejection remaining on appeal is the Examiner's rejection of claims 9, and 12-16 under the first paragraph of 35 U.S.C. § 112 as failing to comply with the written description requirement.

Claims 9 and 12 read as follows (emphasis added to indicate the language in dispute):

> 9. A method of manufacturing a collimator assembly as described in claim 8, further comprising:
>
> slicing said block to a desired collimator depth *such that a plurality of collimator assemblies may be produced from said block with varied collimating characteristics*.
>
> 12. A method of manufacturing a collimator assembly comprising:
>
> producing a plurality of single-fiber fibers, each of said single-fiber fibers produced by:
>
> sintering a *high-z powder* and a glass powder mixture to form a first collimator tube;
>
> placing a core element within a center collimator path of said collimator tube to create a base-tube couple; and
>
> reducing a couple cross-section of said base-tube couple such that said base-tube couple becomes a single-fiber fiber;
>
> arranging said plurality of single-fiber fibers into a first multi-fiber bundle; and

[2] All references to paragraph numbers are as in the Specification as filed.

dissolving said core elements such that a plurality of hollow fibers is generated.

Issues

Has Appellant shown reversible error in the Examiner's determination that the claimed feature of "slicing said block to a desired collimator depth such that a plurality of collimator assemblies may be produced from said block with varied collimating characteristics" as set forth in dependent claim 9 violates the written description requirement in the first paragraph of 35 U.S.C. § 112?

Has Appellant shown reversible error in the Examiner's determination that claimed feature of "sintering a high-z powder" as set forth in claim 12 violates the written description requirement in the first paragraph of 35 U.S.C. § 112?

We answer both of these questions in the affirmative.

Findings of Fact

Appellant's Figures 7 and 8 are reproduced below:

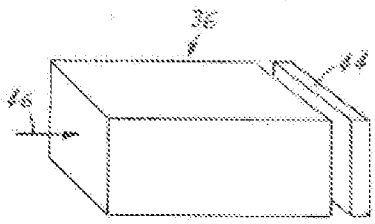

FIG. 7

FIG. 8

Figure 7 depicts a permanently fused block of multi-fibers 36 with the disc 44 sliced off after fusion of the block 36 (Spec. [0020],[0021]); and Figure 8 depicts the disc 44 *per se* (Spec. [0021]). Appellant's Specification

describes that the disc 44 "can be cut off of the block 36 . . .to a desired collimator depth 48" (Spec. [0021]), and depicts 44 as a fractional slice of block 36 (Spec., Fig. 7). "The desired collimator depth 48 may be determined by the scattering requirements of the collimator assembly." (Spec. [0021]). The disc 44 "may be cut perpendicular to the fiber axis 46" or "may be cut at an angle to the fiber axis 46 to provide a tilting design" as needed (*id.*).

Accordingly, one of ordinary skill would understand from Appellant's Specification and Figures that more than one disc (i.e., a plurality of discs) may be cut off from the block 36, each to a desired collimator depth such that a plurality of collimator assemblies may be produced from said block with varied collimating characteristics.

Appellant's Specification also describes as their invention that

> . . . a variety of materials can be utilized to generate the core element 12 and collimator tube 14. In one embodiment, however, it is contemplated that the collimator tube 14 may be comprised of a *high-z glass*. It is further contemplated that in one embodiment the collimator tube 14 may be comprised of any of the following ingredients: lead oxide (PbO), bismuth oxide (Bi2O3), tantalum oxide (Ta2O5), *tungsten* oxide (WO3), thorium oxide (ThO2), hafnium oxide (HfO2), silicon oxide (SiO2), potassium oxide (K2O), boron oxide (B2O3), aluminum oxide (Al2O3), gallium oxide (Ga2O3), germanium oxide (GeO2), cerium oxide (CeO2), and antimony oxide (Sb203). In still another embodiment, metal *tungsten powder can be added to the glass and sintered in with the glass powder* to increase the density and x-ray stopping power. Although a list of ingredients has been provided, a variety of materials and ingredients would be obvious to one skilled in the art in light of the information provided in this disclosure.
>
> (Spec. [0018], emphasis added).

Appellant's state that the materials listed in the first paragraph of the Description of Preferred Embodiment (i.e., Spec. [0018]) are "ALL high-Z materials" (Reply Br. 3).

One of ordinary skill would have understood from Appellant's Specification that the high-z materials listed therein may be powdered and sintered in with the glass powder.

Principles of Law

In order to comply with the written description requirement, an applicant's disclosure must convey, with reasonable clarity to one skilled in the art, that the applicant, as of the filing date sought, was in possession of the claimed invention. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991).

It is not necessary that the disclosure describe the claim limitations exactly, and the PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 263 (CCPA 1976).

It is well established that the content of the drawings may also be considered in determining compliance with the written description requirement. *See, e.g., In re Kaslow*, 707 F. 2d 1366, 1375 (Fed. Cir. 1983).

Analysis

Appellant contends that "one skilled in the art would understand" that the Specification taught that "*discs* 44 may be sliced off" the block 36, and this allows collimators of different depth (which is the traditional adjustment for performance) to be sliced off (Reply Br. 2, emphasis added; *see also* App. Br. 4-5). Appellant also contends that the Specification fully supports

the genus of "high-z powder" recited in claim 12 (Reply Br. 3; *see also* App. Br. 5-6). We agree.

The Examiner's position is premised on the fact that the disclosure does not describe the claim limitations exactly as recited in claims 9 and 12 (Ans. 4-6), and that the only "high-z powder" as recited in claim 12 that is explicitly described therein is tungsten powder which does not support the genus of "high-z powder" (Ans. 6).

The Examiner has the initial burden of presenting evidence of reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d at 263. The Examiner has presented no reasons why one would not recognize that a plurality of different depth discs 44 may be cut off the block 36, nor why the artisan would not understand that different depth collimators would have different (i.e., varied) collimating characteristics. Accordingly, the Examiner has not met his burden.

Furthermore, with respect to the "high-z powder" of claim 12, when the original written description describes something within the scope of the claim, the Examiner must do more than point out the difference in scope. This is so because "that a claim may be broader than the specific embodiment disclosed in a specification is in itself of no moment." *In re Rasmussen*, 650 F.2d 1212, 1215 (CCPA 1981). There are instances in which a narrower disclosure can support broader claims. *Id.*[3]

[3] *See also In re Smythe*, 480 F.2d 1376, 1382 (CCPA 1973) (Claims reciting "inert fluid" supported by specification disclosing only air or other gas because it was the characteristics of a fluid that made the segmentizing medium work in the invention).

This is not to say that a species always constitutes a description of the genus of which it is part, it is only to say that an examiner must consider the specific facts of the case and provide supporting reasoning. The Examiner must provide some analysis that either: (1) considers factors such as the knowledge of one skilled in the art and the level of predictability in the field, *Bilstad v. Wakalopulos*, 386 F.3d 1116, 1124 (Fed. Cir. 2004), or (2) demonstrates that the specification reflects that the invention is no broader than what is disclosed in the specification.[4]

The Examiner provided no such analysis here. Furthermore, as the Appellant points out, one of ordinary skill in the art would have understood that the Specification does indeed describe a number of high-z materials, and would have likewise appreciated that each of these high-z materials may be formed into a powder to mix in with the glass powder, as explicitly described with respect to tungsten powder (*see,* FFs; *generally* App. Br; Reply Br.).

For the above stated reasons, we share Appellant's determination that one of ordinary skill who had read the present Specification would have appreciated that the inventor had possession of the claimed subject matter.

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[4] *See Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1159 (Fed. Cir. 1998) (specification, by distinguishing prior art cup implant shapes as inferior and touting the advantage of a conical shape, made clear that the invention was limited to conical shaped cups and nothing broader); *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998) (original disclosure that clearly identified the console as the only possible location for controls did not provide support for claims that did not limit the location).

Conclusions of Law

Appellant has shown error in the Examiner's determination that the above-discussed features of claim 9 and 12 violates the written description requirement in the first paragraph of 35 U.S.C. § 112.

As a consequence, we cannot sustain the Examiner's § 112, first paragraph, rejection of claims 9 and 12-16 as failing to comply with the written description requirement.

Order

The decision of the Examiner is reversed.

REVERSED

kmm

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